

1. KONOVALOV, I. N.

2. USSR (600)

4. Plant Introduction

7. Changes in the life functions of plants as related to their trans-
plantation to new regions.
Trudy Bot. inst. AN SSSR. Ser. 6 No. 2, 1952

9. Monthly Lists of Russian Accessions. Library of Congress, March 1953, Unclassified.

KOROVALOV, I. N.; ARTYUSHENKO, Z. T.

Fruit - Morphology

Morphology of pod and berry types of fruit. Trudy Bot. inst. AN SSSR., Ser. 7, No. 2, 1951

9. Monthly List of Russian Accessions, Library of Congress, ²June 1958. Unclassified.

1. I. N. KENOVALOV
2. USSR (600)
4. Catalpa
7. Change in the rhythm of growth of mulberry and catalpa due to adaptability during acclimztization. Dokl. AN SSSR 88 no. 1. 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ZALENSKIY, O.V.; SEMIKHATOVA, O.A.; VOZNESENSKIY, V.L.; KOMOVALOV, I.N.,
redaktor; YAKOVLEVA, V.M., redaktor; KARYAKIN, A.V., redaktor;
ABONS, R.A., tekhnicheskii redaktor.

[Using radioactive carbon C^{14} in the study of photosynthesis]
Metody premeneniia radioaktivnogo ugleroda C^{14} dlia izucheniia
fotosintez. Moskva, Izd-vo Akademii nauk SSSR, 1955. 88 p.
(Photosynthesis) (MLRA 8:11)
(Carbon-isotopes)

KONOVALOV, I.N.; KONDRUTSKAYA, N.V.

Change in the physiological processes of plants in connection with
acclimatization. Trudy Bot.inst.Ser.4 no.10:101-138 '55.

(Acclimatization (Plants))

(MLPA 9:5)

✓ The application of labeled carbon (carbon-14) in the study of physiological adaptation of plants to environmental conditions. I. N. Konovalov and E. N. Mikhaleva (V. I. Komarov Bot. Inst., Leningrad). *Botan. Zhur.* 40, 1-14 (1955).—Hazelants from widely different geographic regions have been grown in the Leningrad Botanical Park of the Academy of Science for 5 years and tested for their respective photosynthetic intensity, by using the technique of C^{14} isotope in these studies. Most of the tests were made during the periods of max. growth (July) and at the end of the growing season (Sept.). Other tests included also the August period. The measurements consisted chiefly in tracing the intensity of photosynthesis in terms of $CO_2/g.$ of dry matter/hr. Plants originating in more severe climatic environment are endowed with a higher intensity of photosynthesis, less sensitivity in photosynthetic activity during the day, and fluctuating conditions of the environment. This meant a more vigorous growth. J. S. J.

Konovator I. N.

The physiology of the "Chinese mushroom." I. N. Konovator and M. N. Semenova (V. L. Komarov Botan. Inst., Leningrad). *Botan. Zhur.* 40, 567-70 (1955).—The cellular components of *Medusomyces gieserii* are resistant to low pH environments, approaching 1. Cultures of this kind kept for 2 years still exhibited antimicrobial activity. I. S. Joffe

USSR .

9879* Experiments in the Increase of Frost Resistance in Stock and Cabbage Under the Influence of Extracts From Frost-Resistant Plants. Opyty po povysheniiu mrozostoičnosti levkaja i kapusty pod vlijaniem ekstraktov iz zimostoičkih rastenii. (Russian.) I. N. Kononov. *Doklady Akademii Nauk SSSR*, v. 101, no. 4, Apr. 1, 1955, p. 767-770. Carbohydrate content and oxidation-reduction activity in plants from seed treated with extract from badan plants. Photographs, tables. 11 ref.

Botanical Inst. in V. L. Komsrov, Acad. Sci. USSR

KONOVALOV, I.N. (Leningrad)

Changes in the physiological processes of plants during acclimatization.
Uch.zap.Kaz.un. 115 no.10:67-69 '55. (MLRA 10:5)

(Leningrad Province--Trees)
(Acclimatization (Plants))

SOKOLOV, V.S., doktor biologicheskikh nauk, professor, redaktor; SOKOLOV, S.Ya., doktor biologicheskikh nauk, professor, redaktor; IL'IN, M.M., doktor biologicheskikh nauk, professor, redaktor; KONOVALOV, I.H., doktor biologicheskikh nauk, professor, redaktor; SATSIKHOVA, I.F., kandidat farmatsevticheskikh nauk, redaktor.

[New useful plants; recommendations of the all-Union conference on the introduction of new useful plants into cultivation] Novye poлезnye rasteniya; rekomendatsii Vsesoiuznogo soveshchaniya po vvedeniyu novykh poлезnykh rastenii v kul'turu. Moskva, 1956. 67 p. (MLRA 9:6)

1. Akademiya nauk SSSR. Botanicheskiy institut.
(Plant introduction) (Plants, Cultivated)

MIKHALEVA, Ye.N.; KONOVALOV, I.N.

Adaptive variations in the gas exchange of Persian walnut plants during
acclimatization. Trudy Bot.inst. Ser.4 no.11:47-61 '56. (MIRA 9:9)
(Photosynthesis) (Acclimatization (Plants)) (Walnut)

BRILLIANT, V.A.; KONOVALOV, I.N.

Survey of some results of research in the field of plant physiology
and ecology done at the V.L. Komarov Botanical Institute of the
Academy of Sciences of the U.S.S.R. Trudy Bot. inst. Ser. 4 no.12:
5-6 '58. (MIRA 11:7)

(Botanical research)

KONOVALOV, I.N.; MIKHALEVA, Ye.N.; ZAKMAN, L.M.

Some new data on the physiological nature of frost resistance in
plants. Trudy Bot. inst. Ser. 4 no.12:299-312 '58. (MIRA 11:7)
(Plants--Frost resistance)

6. Absorption and translocation of mineral elements applied to the leaves of plants. B. I. ZILBERMAN and G. N. ZILBERMAN, USSR Academy of Sciences, Moscow.
7. Protective processes under the conditions of an adverse water regime. A. N. ZILBERMAN, A. N. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
8. The role of oxidizing enzymes in the ripening and storage of fruit. A. A. ZILBERMAN, A. N. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
9. Dependence of mineral composition of plants on the environmental conditions. A. I. ZILBERMAN, USSR Academy of Sciences, Moscow.
10. Introduction of toxic substances on growth substances and their effects. A. P. ZILBERMAN, A. N. ZILBERMAN, A. N. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
11. Metabolic acids and plant metabolism. A. N. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
12. The study of demethylated acids in the nucleus and its changes in the plant cell. A. N. ZILBERMAN, A. N. ZILBERMAN, A. N. ZILBERMAN, A. P. ZILBERMAN, and A. P. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
13. Biochemical properties of plant cell nuclei. A. N. ZILBERMAN and A. P. ZILBERMAN, A. N. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
14. Interrelationships between vegetative and photosynthetic. A. N. ZILBERMAN, A. N. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
15. Outcomes other than cytoplasmic acids in plants. A. N. ZILBERMAN, A. N. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
16. On vegetative problems. A. N. ZILBERMAN, Institute of Botany, USSR Academy of Sciences, Moscow.
17. Promoting effect of microorganisms on the resistance of plants to unfavorable conditions. A. N. ZILBERMAN, USSR Academy of Sciences, Moscow.
18. L'applications des changements cytoplasmiques et chloroplastiques des organismes végétaux embryonnaires pour la synthèse de produits des plantes en culture. A. N. ZILBERMAN, L'Académie des Sciences de l'URSS, Moscou.
19. Particularities of the changes of physiological processes in plants correlated with fruit maturation. A. N. ZILBERMAN, A. N. ZILBERMAN, A. N. ZILBERMAN, A. P. ZILBERMAN, and A. P. ZILBERMAN, USSR Academy of Sciences, Moscow.
20. Photosynthesis in trees. A. N. ZILBERMAN, Laboratory of Light Physiology, USSR Academy of Sciences, Moscow.
21. The vegetation of natural grasslands of the USSR. A. N. ZILBERMAN, USSR Academy of Sciences, Moscow.
22. The ecology of fertilization in flowering plants. A. N. ZILBERMAN, USSR Academy of Sciences, Moscow.
23. The correlation between the concepts "forest ecology" and "forest biogeography" and their importance for the classification of forests. A. N. ZILBERMAN, Forest Institute, USSR Academy of Sciences, Moscow.

Report submitted but not presented at the 19th. Botanical Congress

L'VOV, S.D., otv.red. [deceased]; KONOVALOV, I.N., prof., doktor biolog. nauk, otv.red.; VIKHREV, S.D., red.izd-va; ZAMARAYEVA, R.A., tekhn.red.

[Results of and prospects for research in plant development; collection of papers based on data of the 2nd Conference of the All-Union Botanical Society, May 9-15, 1957] Itogi i perspektivy issledovaniy razvitiya rastenii; sbornik rabot po materialam II delegatskogo s'ezda Vsesoyuznogo botanicheskogo obshchestva 9-15 maya 1957 g. Leningrad, Izd-vo Akad.nauk SSSR, 1959. 222 p.

(MIRA 12:12)

1. Vsesoyuznoye botanicheskoye obshchestvo. 2. Chlen-korrespondent AN SSSR (for L'vov).

(Botany--Physiology)

KONOVALOV, I.N.; EYDEL'MAN, Z.M.

V.N.Liubimenko's scientific work and the subsequent development of his theories. Trudy Bot.inst.Ser.4 no.13:7-12 '59.
(MIRA 13:3)

(Liubimenko, Vladimir Nikolaevich, 1873-1937)
(Plant physiology)

KONOVALOV, I.N.; MIKHALEVA, Ye.N.; SHCHEPOT'YEV, F.L.; POBEGAYLO, A.I.

Changes in the physiological processes of plants resulting
from their adaptation to new conditions of life. Trudy
Bot.inst.Ser. 4 no.13:113-135 '59. (MIRA 13:3)
(Walnut) (Acclimatization (Plants))

KIR'YALOV, N.P.; KONOVALOV, I.N.

Accumulation of economically valuable substances in plants under
different environmental conditions. Trudy Bot.inst.Ser.6 no.7:
40-47 '59. (MIRA 13:4)

1. Botanicheskiy institut im. V.I.Komarova AN SSSR (BIN).
Leningrad.

(Plants--Chemical composition)

KONOVALOV, I.N.; LITVINOV, M.A.; ZAKMAN, L.M.

Variations in the nature and physiological characteristics of the tea fungus (*Medusomyces gisevii* Lindau) due to the conditions of cultivation. Bot. zhur. 44 no.3:346-349 Mr '59.

(MIRA 12:7)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR, Leningrad.
(Antibiotics) (Yeast) (Acetobacter)

KONOVALOV, I.N.; SAPOZHNIKOV, D.I.; HYDEL'MAN, Z.M.

Effect of Darwin's theory of evolution on the development of research in certain branches of plant physiology. Bot. zhur. 44 no.11:1546-1552 N '59. (MIRA 13:4)

1. Botanicheskiy institut im. V.L.Konarova Akademii nauk SSSR, Leningrad.

(Plant physiology)

KONOVALOV, I.N.; LERMAN, R.I.; MIKHALEVA, Ye.N.; SHILOVA, N.V.

Characteristics of changes in the physiological processes of plants
as related to their adaptation to new environmental conditons
[with summary in English]. Trudy Bot. inst. Ser.4 no.14:7-53 '60:

(MIRA 14:3)

(Botany--Ecology)(Plant physiology) (Leningrad Province--Walnut)

KONOVALOV, I.N.; ZHUYKOVA, I.V.; ZINOV'YEV, L.S.

Effect of gibberellic acid on growth characteristics and winter
hardiness of woody plants. Bot. zhur. 45 no.12:1721-1731 D '60.

(MIRA 13:12)

1. Botanicheskiy institut imeni V.L. Komarova Akademii nauk SSSR,
Leningrad.

(Gibberellic acid)

(Woody plants)

SHKOL'NIK, M.Ya., red.; KONOVALOV, I.N., red.

"Physiology of irrigated wheat" by N.S.Petinov. Reviewed by
M.IA.Shkol'nik, I.N.Konovalev. Izv. AN SSSR. Ser. biol. no.4:
653-656 J1-Ag '61. (MIRA 14:9)
(WHEAT) (PETINOV, N.S.)

ZINOV'YEV, L.S.; KONOVALOV, I.N.; CHERNYAYEVA, I.I.

Effect of gibberellic acid on the interruption of dormancy in
arboraceous plants. Bot. zhur. 46 no.12:1781-1786 D '61.

(MIRA 15:1)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR i
Vsesoyuznyy institut sel'skokhozyaystvennoy mikrobiologii
Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni Lenina,
Leningrad.

(Gibberellic acid)
(Dormancy in plants)
(Trees)

KONOVALOV, I.N.; LERMAN, R.I.; MIKHALEVA, Ye.N.; SMETANNIKOVA, A.I.

Changes of physiological processes in plants in the course of
their introduction as related to their frost resistance. Trudy
Bot. inst. Ser. 4 no.15:68-83 '62. (MIRA 15:7)
(Plants--Frost resistance) (Plant introduction)

MANOLYLENKO, Kseniya Viktorovna (Ryazanskaya); RAYKOV, B.Ye., prof.,
zasl. deyatel' nauki, otv. red.; BAKHTEYEV, F.Kh., prof.,
retsenzent; BOBROV, Ye.G., prof., retsenzent; KANAYEV, I.I.,
prof., retsenzent; KONOVALOV, I.N., prof., retsenzent;
BELKINA, M.A., red. izd-va; AREF'YEVA, G.P., tekhn. red.

[A.F. Batalin, the outstanding Russian botanist of the 19th
century] A.F. Batalin, vydaiushchiisia russkii botanik XIX veka.
Moskva, Izd-vo Akad. nauk SSSR, 1962. 130 p. (MIRA 16:2)
(Batalin, Aleksandr Fedorovich, 1847-1896)

KONOVALOV, I.N.; VASIL'YEV, A.V.; MIKHALEVA, Ye.N.; DZHALAGONIYA, K.T.

Characteristics of changes in the physiological processes of
some subtropical plants as related to their origin. Trudy
Bot. inst. Ser. 4 no.16:75-100 '63. (MIRA 17:2)

KORYAKINA, Valentina Fedorovna; KONOVALOV, I.N., otv. red.;
VIKHREV, S.D., red. izd-va; SMIRNOVA, A.V., tekhn.red.

[Characteristics of the growth and development of perennial forage plants] Osobennosti rosta i razvitiia mnogoletnikh kormovykh rastenii. Moskva, Izd-vo "Nauka," 1964. 286 p. (MIRA 17:3)

KONOVANOV, Il'ya Nikolayevich; VIKHREV, S.D., red.izd-va; SOROKINA, V.A.,
tekhn.red.

[Physiology of introduced plants.] Fiziologiya introdutsiruemykh
rastenii. Moskva, Izd-vo Akad. nauk SSSR, 1963. 61 p. (Komarovs-
kie chteniia no.16). (MIRA 17:2)

KONOVALOV, I. N.

"Increase of frost resistance of woody plants by control of growth rhythm."

report submitted for 10th Intl Botanical Cong, Edinburgh, 3-12 Aug 64.

AS USSR, Leningrad.

MANOYLENKO, K.V.; KONOVALOV, I.N.; ZHUYKOVA, I.V.

Study of the combined effect of gibberellin, heteroauxin and mineral nutrition on woody plants. Bot.zhur. 49 no.11:1600-1608 N '64.

(MIRA 18:1)

1. Botanicheskiy institut imeni V.L.Komarova AN SSSR, Leningrad.

RADCHENKO, S.I.; KONOVALOV, I.N.; POZDOVA, I.M.

Cold resistance of corn in the Karelian Isthmus. Trudy Bot.inst. Ser.4
no.17:53-72 '64. (MIRA 18:1)

MANOYLENKO, Kseniya Viktorovna; BAKHTEYEV, F.Kh., prof.,
retsenzent; KANAYEV, I.I., prof., retsenzent; KONOVALOV,
I.N., prof., retsenzent; YAKOVLEV, M.S., prof.,
retsenzent; RAYKOV, B.Ye., zasl. deyatel' nauki prof.,otv.
red.

Nikolai Ivanovich Zheleznov. Moskva, Nauka, 1965. 203 p.
(MIRA 18:12)

KONOVALOV, I.T.

Effect of forced vibrations of bars on the honing process.
Stan. 1 instr. 36 no. 12:8-9 D '65 (MIRA 19:1)

KUZNETSOV, S.I.; SEREBRENNIKOV, O.V.; DEREVYANKIN, V.A.; VOLKOVA, P.I.;
PAVLOV, F.N.; YEVTYUTOV, A.A.; CHEMODANOV, V.S.; STOLYAR, B.A.;
KONOVALOV, I.V.; LIVER, V.B.; MIYCHENKO, V.S.; SMIRNOV, B.A.

"Production of alumina" by A.I. Lainer. Reviewed by S.I.

Kuznetsov and others. TSvet. met. 34 no.11:85-86 N '61.

(MIRA 14:11)

1. Ural'skiy politekhnicheskiy institut (for Kuznetsov,
Serebrennikov, Derevyankin). 2. Ural'skiy filial AN SSSR
(for Volkova, Pavlov). 3. Ural'skiy alyuminiyevyy zavod (for
Yevtyutov, Chemodanov, Stolyar). 4. Bogoslovskiy alyuminiyevyy
zavod (for Konovalov, Liver, Miychenko). 5. Sverdlovskiy
Sovnarkhoz (for Smirnov).

(Alumina)

(Lainer, A.I.)

KCNOVALOV, I.V.

Genesis of Yeravninsk iron ore deposits. Geol. i geofiz. no.11:60-
68 '64. (MIRA 18:4)

1. Institut zemnoy kory Sibirskogo otdeleniya AN SSSR, Irkutsk.

KONOVALOV, K.

All schoolchildren get breakfast and lunch in the school dining
room. Obshchestv. pit. no. 6:31 Je. '63. (MIRA 16:12)

1. Direktor tresta stolovykh Mybyshevskogo rayona Leningrada.

KONOVALOV, K.A., inzh.

Signal light networks with semiautomatic block systems should be
standardized. Avtom., telem.i sviaz' 6 no.4:29.30 Ap '62.
(MIRA 15:4)

1. Lengiprotrans.

(Railroads--Signaling)

KONOVALOV, K.A.

Selection of a standard semiautomatic block system network.
Avtom., telem. i sviaz' 8 no.11:16-19 N '64.

(MIRA 17:12)

1. Rukovoditel' gruppy Leningradskogo gosudarstvennogo proyektne-
izyskatel'skogo instituta Gosudarstvennogo proizvodstvennogo ko-
miteta po transportnomu stroitel'stvu SSSR.

KONOVALOV, K. A., inzh.

Design workers need good handbooks. Avtom., telem. i svyaz' 7
no.4:41 Ap '63. (MIRA 16:4)

1. Lengiprotrans.

(Railroads—Signaling)

SKHOVALOV, S.D.: KEMENY, I.I.

Tooling machine and ways of improving a computer-search plane for
deacidifying liquid system by means of electromagnetic stirring.
Mag. glav. no.3434-777 183. (MIRA 18:20)

KONOVALOV, K.D.; GRUZINOV, K.V.

Investigating blast furnace combustion zones. Trudy Ural politekh.
inst. no.105:18-29 '60. (MIRA 14:3)
(Blast furnaces—Combustion)

L 14243-66 EWT(m)/EWA(d)/EWP(t)/EWP(s)/EWP(b) IJP(c) JD

ACC NR: AP5024914

UR/0382/65/000/003/0139/0144

AUTHOR: Konovalov, K.D.; Kochnev, E.K.

ORG: None

TITLE: Results of tests and approaches to the optimization of an external to the blast furnace installation for the removal of sulphur from cast iron by electrical stirring^{15, 14}

SOURCE: Magnitnaya gidrodinamika, no. 3, 1965, 139-144

TOPIC TAGS: metal refining, cast iron refining, cast iron desulphurization, electromagnetic chemical refining, magnetohydrodynamic stirring

ABSTRACT: Research on cast iron desulphurization by chemical additives and electrodynamic stirring is discussed. AC electromagnets were utilized for stirring. The frequency used was 50 c/s; the initial sulphur content of the pig iron was between .08% and .14%. mixtures of Al, CaF and CaO, Fig. 1; NaCl, - Fig. 2; and Na₂CO₃, - Fig 3, were tried. Up to around 60% of sulphur could be removed. Analysis, observations and experiments with a mercury similitude model point to 26 c/s as the optimum frequency. Heating of the desulfurator/iron interface is considered necessary. Electrical features of the power supply and of the controls are given. Orig. art. has 6 figs, 1 table. Figures on card 2/2.

Card 1/2

UDC 669.162.267.6 + 538.4

2260 Konovalov, K.M.

Stroitel'stvo I Mekhanizatsiya Rabot Na Zhivot-Novodcheskikh Fermakh. Posobiye
Dlya Agrozootekhn. Kursov. Ashkhabad, Turkmengosizdat, 1954. 44s. s ill.
19sm. 10.000 EKZ. 50k. - Na Turkm. Yaz.-
(54-56039) 636.083.1:69-636.0025

DANILOV, P.M.; KONOVALOV, K.N.; FEDER, L.I.; CHUDAYEVICH, M.G.

Improvements in the technology of smelting and pouring transformer steels. Fiz.met.i metalloved. 1 no.1:139-142 '55. (MLRA 9:3)

1. Kuznetskiy metallurgicheskiy kombinat imeni Stalina.
(Sheet steel--Metallurgy)

A. NOVALON, R. N.

Distr: 4E2c

Some Defects of 88 RbMYN Steel

M. L. N. S. ...

for

Submarine Metallurgical ...

KONOVALOV, K.N.

Heating ingot deadheads with gas. Bul. TSNIGEM no.16:48-49 '57.
(MIRA 11:5)

1. Kuznetskiy metallurgicheskiy kombinat.
(Steel castings)

TOLSTOGUZOV, N. V., KONOVALOV, K. N., GLAZOV, A. N., TEDER, L. I., DANILOV, P. M.
SHIRINKIN, E. N., and GUDAYEVICH, M. G.

"Vacuum Treatment of the MK 15-Steel and Commercial Experience of
the Vacuum Transformer Treatment."

paper presented at Second Symposium on the Application of Vacuum Metallurgy.

Moscow, 1-6 Jul 58

133-58-4-9/40

AUTHORS: Konovalov, K. N., Korneva, N. K., Danilov, P. M.,
Teder, L. I., Drobyazko, T. T. and Shtepa, A.S., Engineers.

TITLE: Gaseous Heating of Ingot Heads (Gazovyy obogrev
pribyl'noy chasty slitka)

PERIODICAL: 'Stal', 1958, Nr 4, pp 311-316 (USSR)

ABSTRACT: The use of an oxygen-coke-oven gas mixture for heating the hot tops of ingots weighing 5.6 to 6.7 tons developed on the Kuznetsk Works is described. The following optimal parameters for injector burner (Fig.1) were established: the diameter of the oxygen nozzle - 5 mm; the diameter of the mixing chamber - 16 to 18 mm; the diameter of the outlet 17 mm widening to 21 mm, the diameter of the tube for the gaseous mixture 1 1/2". Oxygen pressure 4-7 atm, coke oven gas pressure 200-350 mm H₂O. Consumption of gas 40-70 m³/hr and of oxygen 15-30 m³/hr. Experiments were carried out on 6-ton ingots of open hearth steel using the usual and experimental hot tops (of a smaller cross section but better insulated). Floating hot tops (Fig.2) were also tested. The duration of heating varied from 60 to 90 min, depending on the level of metal. The influence of gaseous heating on the

Gaseous Heating of Ingot Heads

133-58-4-9/40

quality of steel was studied on transverse macro-templets cut out from the upper part of ingots after crop end (Fig.3). Chemical analysis indicated oxidation of aluminium, manganese and silicon (Fig.4). When bunkerite was added and carrying out heating under a protective layer of slag (by adding chamotte, furnace slag etc.) with a small addition of deoxidants, the oxidation of elements was stopped. The experimental results are shown in the Table. It was established that gaseous heating is possible, the quality of metal did not deteriorate and the yield of good semis increased by 5-7% due to a decrease in crop head from 17-18% to 10-11%. Similar experiments were carried out with stainless steel 1Kh18N9T. The results obtained indicated that the heating conditions (the ratio of the consumption of gas and oxygen and heating intensity) have a deciding influence on the oxidation of titanium and the quality of the macro-structure of steel. The following optimal conditions were established:

		Heating periods.		
		I	II	III
Card 2/3	duration of heating period, min.	30-40	30-40	20-30
	oxygen pressure, atm	6	5	4-3

KONOVALOV, K.N.

PLATE 1 BOOK EXTRACTS 509/514

Abstracts and SSCN. Institute for Radio-Technical Sciences and Protective Steel
Prilozheniya k spetsializatsii (Use of Vacuum in Metallurgy) Moscow, 1960
at SSCN, 1960. 31 p. Extra slip inserted. 4,500 copies printed.

Spetsializatsiya v oblasti radio-tekhnicheskikh nauk i tekhnologii. Institut metallografi i metallurgii. Institut radio-tekhnicheskikh nauk i tekhnologii. Institut metallografi i metallurgii.

Step, M.I. A.M. Smirnov, Corresponding Member, Academy of Sciences USSR; M. of
Publishing House G.I. Kharkovskiy, Tech. Sci. S.D. Kharkovskiy.

Abstracts: The book contains information on steel making in vacuum induction fur-
naces, and vacuum arc furnaces, reduction processes in vacuum, and degassing of
steel and alloys. The furnishing of equipment and technology, especially
vacuum furnaces and vacuum casting of steel, are also analyzed. Personalities are
mentioned in connection with the work of the articles and will appear in the table
of contents. Some articles have been translated from English. Some of the

Abstracts: The book contains information on steel making in vacuum induction fur-
naces, and vacuum arc furnaces, reduction processes in vacuum, and degassing of
steel and alloys. The furnishing of equipment and technology, especially
vacuum furnaces and vacuum casting of steel, are also analyzed. Personalities are
mentioned in connection with the work of the articles and will appear in the table
of contents. Some articles have been translated from English. Some of the

PART IV. DECLASSIFICATION OF STEEL AND ALLOYS

North, L.H., A.L. Lantieri and A.M. Samuels. Vacuum Treatment of Beeswax
Steel 145

Kawakami, H.P., and G.S. Johnson. The Effect of Vacuum Treatment in Lead
on the Properties of Invariant Steel 151

Kawakami, H.P., and G.S. Johnson. The Effect of Vacuum Treatment in Lead
on the Properties of Invariant Steel 151

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

Giles, D.M., G.H. Johnson, J.L. Johnson, R. Johnson, J.L. Johnson, and
K.O. Johnson. Use of Vacuum for Improving the Quality of Alloyed Steels
Manufactured by the Cold-Chamber Process. Some Theoretical and Practical Prob-
lems of Steel Degassing 156

(Kuznets Metallurgical Combine)

KONOVALOV, K.N.; PASHCHENKO, V.Ye.

Technology of smelting and ~~pouring~~ cold-rolled transformer
steel. Metallurg 7 no.7:17-20 JI '62. (MIRA 15:7)

1. Kuznetskiy metallurgicheskiy kombinat.
(Steel ingots—Testing)
(Sheet steel—~~Magnetic~~ properties)

ACCESSION NR: AP4019474

S/0133/64/000/003/0229/0231

AUTHORS: Konovalov, K. N. (Engineer); Glazov, A. N. (Engineer); Danilov, P. M. (Engineer); Pashchenko, V. Ye. (Engineer)

TITLE: The effect of ingot mold lubrication on the surface quality of steel
1Kh18N9T

SOURCE: Stal', no. 3, 1964, 229-231

TOPIC TAGS: steel, 1Kh18N9T stainless steel, steel melting, steel pouring, ingot mold lubricant, oxidizing lubricant, reducing lubricant, evaporative lubricant, refractory powder, slag powder, naphthalene, anthracene, petrolatum, lakoil lubricant

ABSTRACT: The effect of ingot mold lubrication on the quality of the surface of stainless steel ingots (1Kh18N9T) was studied experimentally. The casts were produced by both top- and bottom-pouring methods. The results showed that the addition of oxidizing or reducing powders to the usual lubricant did not eliminate the formation of crust and of pitted surface, while evaporative lubricant applied to cool molds decreased the number of pits but increased various defects associated

Card 1/2

ACCESSION NR: AP4019474

with the formation of crust. It was also determined that the absence of lubricant or the use of the refractory and slag powders as substitutes for lubricants increased the number of scabs on the ingot surface, and that the presence of moisture or of organic matter in such powders increased the degree of surface pitting. Adding dry borax to the "lakoil" lubricant improved somewhat the surface quality, whereas using naphthalene, anthracene, and petrolatum as lubricants created reducing conditions during steel pouring and resulted in a uniform "lubricating" layer of soot on the mold walls and produced a greatly improved general appearance of the ingot surface. Orig. art. has: 3 figures.

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

SUBMITTED: 00

DATE ACQ: 27Mar64

ENCL: 00

SUB CODE: ML

NO REF SOV: 003

OTHER: 000

Card 2/2

KONOVALOV, K.N., inzh.

Some causes of surface defects in stainless steel. Stal' 25
no.2:153-157 F '65. (MIRA 18:3)

1. Kuznetskiy metallurgicheskiy kombinat.

GLAZOV, A.N.; KONOVALOV, K.N.; MONASTYRSKIY, V.Ya.; PASHCHENKO, V.Ye.

Improving the quality of ingots of ShKx15 ball bearing steel.
Metallurg 10 no.8:20-21 Ag '65. (MIRA 18:8)

1. Kuznetskiy metallurgicheskiy kombinat.

MONASTYRSKIY, V.Ya.; DUBROVIN, A.K.; LASKARONSKIY, E.N.; GLAZOV, A.N.;
DANILOV, P.M.; KONOVALOV, K.N.; MIKHEYEV, V.G.; TEDER, L.I.

Improving the technology of smelting, pouring, and heating
0 ~ 2Kh13 steel ingots. Metallurg 10 no.12:14-16 D '65.
(MIRA 18:12)

1. Kuznetskiy metallurgicheskiy kombinat.

ZHURIKOV, V.N.; IL'IN, M.A.; KRASAVIN, N.N.; PISKUNOV, V.T.;
RUSINOV, I.V.; SUVOROVA, L.I.; TSIKOTO, I.A.;
KONOVALOV, L., red.; MUKHIN, Yu., tekhn. red.

[Reader in agricultural economics] Kniga dlia chteniia po
ekonomike sel'skogo khoziaiatva. Moskva, Politizdat,
1963. 287 p. (MIRA 17:1)

AL'PEROVICH, Yuriy Izrailevich, zhurnal'ist; KOROVALOV, L., red.

[In the fields of the future] Na poliakh budushchego. Moskva, Politizdat, 1964. 174 p. (MIRA 18:2)

DUKHNEVICH, Vadim Ignat'yevich; KONOVALOV, Leopol'd Anatol'yevich;
SKOROKHODOV, A.A., retsenzent; RADUKIN, V.P., red.; SYRCHINA,
M.M., red. ~~izd-vo~~; MAL'KOVA, N.T., tekhn. red.

[Steel costs]Sebestoimost' stali. Sverdlovsk, Metallurg-
izdat, 1962. 57 p. (MIRA 15:7)
(Steel--Costs)

KONOVALOV, Leopol'd Anatol'yevich

[Analyzing the potentials of the cost reduction of
electric steel] Analiz rezervov snizheniia sebe-
stoimosti elektrostali. Moskva, Metallurgiya, 1965.
113 p. (MIRA 18:7)

KONOVALOV, L.A.; GLUVSHTEYN, I.V., red.; KOVALEVSKIY, M.A., red.
izd-va; EN'YEKOVA, G.M., tekhn. red.

[Business accounting is a means of mobilizing internal
potentials] Khoziaistvennyi raschet - uslovie mobilizatsii
vnutrennikh rezervov. Moskva, Metallurgizdat, 1963. 25 p.
(MIRA 17:3)

KONOVALOV, L.

For themselves. Okhr. truda i sots. strakh. 5 no.5:10-11
My '62. (MIRA 15:5)

1. Tekhnicheskij inspektor Novosibirskogo oblsovprofa.
(Berdsk--Radio industry--Hygienic aspects)

NOVOVALOV

SAKHAIDY, I.I.; SALADIN, K.A.

Application of high-frequency currents for the preliminary plastication in the injection molding of thermoplastics. Trudy MIKHM
27:130-137 '64.
(MIRA 18:8)

MAT'TSEV, M.V.; KONOVALOV, L.I.

Possibilities for increasing brick production. Stroi. mat.
11 no.2:26-27 F '65. (MIRA 18:3)

1. Glavnyy inzh. Cheremushkinskogo keramicheskogo zavoda (for
Mal'tsev). 2. Nachal'nik tekhnicheskogo otdela Cheremushkingskogo
keramicheskogo zavoda (for Konovalov).

ZAYTSEVA, L.I.; IL'YASHENKO, V.S.; KOSHEV, M.I. LONGSHAN, L.H.;
LIPIN, L.V.; CHEBOTAREV, N.T.

Physicochemical properties of the crystal hydrates of
rare-earth sulfates of the terbium subgroup. Zhur.neorg.khim.
10 no.8:1761-1770 Ag '65.

1. Submitted May 5, 1964.

(MIRA 1981)

KONOVALOV, L. N.

USSR/Cultivated Plants. Cereals:

M

Abs Jour: Ref Zhur-Biol., No 17, 1958, 77575.

Author : Terent'yev, V.M.; Stasenko, N.N.; Konovalov, L.N.

Inst : Institute of Biology AS DSSR.

Title : On Several Features of Growth and Development of Grain Crops on Peat Soil.

Orig Pub: Byul. In-ta biol. AN DSSR, vyp. 2, 1956 (1957), 94-99.

Abstract: Observations were conducted for the development of plants of Kitchener wheat on peat and mineral soils. On the peat soil, tillering and shooting up was more intensive, but in the fruit-bearing organs, less dry substance accumulated than on the mineral soil, in connection with which the

Card : 1/2

KRASKO, Lev Maksimovich; KONOVALOV, L., red.; TROYANOVSKAYA, N.,
tekh. red.

[Advanced practices should be known to each agricultural
worker] Peredovoi opyt - kazhdomu rabotniku sel'skogo kho-
ziaistva. Moskva, Gos izd-vo polit. lit-ry, 1961. 46 p.

(MIRA 15:4)

1. Sotrudnik gazety "Sel'skaya zhizn" (for Krasko).
(Agriculture)

38596

S/081/62/000/010/082/085
B166/B144

15.9320

AUTHOR: Konovalev, L. I.

TITLE: Heating rubbers in a high-frequency electric field

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 10, 1962, 659, abstract
10P427 (Tr. Mosk. in-ta khim. mashinostr., v. 21, 1960,
125-130)

TEXT: The process of raising the temperature of polychloroprene and styrene-butadiene rubbers (SBR) to 100°C in an alternating electric field at a frequency of 10 Mc/s (for polychloroprene) and 20-25 Mc/s (for SBR), with a field strength of 300 to 350 v/mm and a h.f. oscillator efficiency of 31% was studied. The temperature was measured by a needle-type thermocouple with the current switched off. This method gives more uniform and rapid heating than the use of hot air, (150°C). Heating a plate of SBR 60 to 100 mm thick takes 2 min; heating a bale of polychloroprene rubber measuring 150·200·60 mm takes only 40 to 45 sec, at a specific electric power consumption of 0.17 kwh/kg and 0.11 kwh/kg respectively. The industrial use of high-frequency currents for drying and decrystallizing ✓
Card 1/2

40969

S/081/62/000/016/040/043
B171/B186

15.9300

AUTHORS: Rozanov, S. P., Kononov, L. I.

TITLE: Investigation on electrophysical properties of rubbers

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 16, 1962, 556, abstract
16P341 (Tr. Mosk. in-ta khim. mashinostr., v. 21, 1960,
107 - 124)

TEXT: The dielectric constant (ϵ), the angle of dielectric losses ($\tan \delta$) and the coefficient of dielectric losses in CMC-30 (SKS-30), CMC-30A (SKS-30A) and in chloroprene rubber (CP) were investigated with the help of an universal Q-meter in the frequency range of 500 ko/sec.-25 mc/sec., at 20 - 150°C. For SKS-30 and SKS-30A, the experimentally obtained value of ϵ was ~2.5 (calculated value 2.27) and changed only little with frequency (ω). $\tan \delta$ increases insignificantly with the increase of ω . Both ϵ and $\tan \delta$ remain constant when the temperature changes but they increase with the increase in plasticity of rubber. For CP, ϵ decreases and $\tan \delta$ increases with the increase of ω , ϵ increases and $\tan \delta$ decreases as the plasticization of rubber progresses. With the progress of sulfur-

Card 1/2

KONOVALOV, L. P.; RAVINSKIY, A. M.; KARPINSKIY, V. N.; Engs.

Steam Boilers

Feeding scheme of boilers operating without a water caretaker, Elek. sta. 24, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Unclassified.

KONOVALOV, I. P., Inzhener.

Water level regulator in condensers and other vessels. Energetik 4 no.9:
11-12 S '56. (Feed-water regulation) (MIRA 9:10)

KONOVALOV, L.P., inzhener.

Operation of automatic controllers of combustion in boilers. *Energetik* 4 no.10:6-7 0 '56. (MLRA 9:11)
(Combustion) (Automatic control)

KONOVALOV, L. P.

AID P - 4370

Subject : USSR/Heat Engineering
Card 1/1 Pub. 110-a - 15/19
Author : Konovalov, L. P., Eng. Dnepr Power System
Title : Self-starting of a stand-by turbopump
Periodical : Teploenergetika, ³/₄ 4, 57, Ap 1956
Abstract : The article gives a description of a self-starting
turbopump carrying water to the boiler drum installed
at one of ~~the~~ power plants in the south. The installation
is controlled by the feedwater pressure. One diagram.
Institution : None
Submitted : No date

KONOVALOV, L.P., inzh.

Steam pressure regulator for turbine end packing. Energetik 5 no.10:
8-9 0 '57. (MIRA 10:12)

(Turbines)

AUTHOR: Konovalov, L.P., Engineer

SOV/91-58-3-5/28

TITLE: The Automatic Loading of Grinders with Coal (Avtomaticheskaya zagruzka mel'nits uglem) Exchange of Experience (Obmen opytom)

PERIODICAL: Energetik, 1958, ⁶Nr 3, pp 8-9 (USSR)

ABSTRACT: The author reports that application of an ER-Sh electronic regulator for controlling the coal load in power-plant mills is a success. The regulator, combined with a heat laboratory, controls the automatic unit as well as temperature measurements (SNATI). The regulator is adjusted to control both mills with or without separator and intermediate hopper. A diagram showing the load regulation of the coal grinder without separator and intermediate hopper is given. The regulator was constructed on the basis of the electronic regulator ER-III and can be substituted by other control units (electromechanical, pneumatic, hydraulic, etc.). The described electronic regulator was installed at the Kennedy ball mills of 5 ton/hour capacity. The mills are working without se-

Card 1/2

SOV/91-58-3-5/28

The Automatic Loading of Grinders with Coal. Exchange of Experience.

parators and intermediate hoppers. Every boiler has 2 mills. The maximum productivity of single boilers is 70 ton/hour. Anthracite dust (ASH) was used as fuel. There is 1 diagram.

Card 2/2

Strength is proposed for alloy and carbon structural steels.

Card 1/2

UDC: 621.81-19

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824320019-

ACC NR: AP7003841

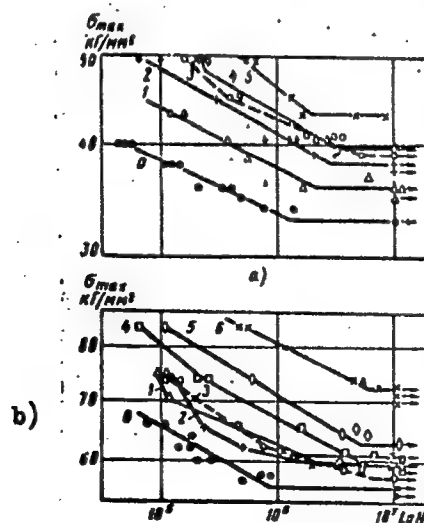


Fig. 1. Fatigue curves: a - 45 steel; b - 40KhN steel for various values of $\Delta\sigma/\sigma_{-1}$.

Curves 0 - tests with constant stress

Orig. art. has: 4 formulas, 7 graphs, and 2 tables.

SUB CODE: 11, 20/ SUBM DATE: none/ ORIG REF: 009

Card 2/2

YAROSLAVSKIY, N.G.; KONOVALOV, L.V.

Long-wave absorption spectra of complex compounds of aniline with metals.
Dokl. AN SSSR 162 no.1:144-146, My '65. (MIRA 18:5)

1. Submitted November 9, 1964.

KONOVALOV, L.V., inzh.

Relative duration of the operating period as a characteristic of the
load graph of a crane gear. Vest.mash. 41 no.7:33-35 J1 '61.
(MIRA 14:6)

(Cranes, derricks, etc.)

KONOVALOV, L.V., inzh.; SPITSYNA, I.O., kand.tekhn.nauk; FREYBERG, S.I.,
inzh.

Life of crane parts. Sbor. VNIPTMASH no.25:3-16 '59

(MIRA 13:11)

(Cranes, derricks, etc.)

KONOVALOV, L.V., inzh.

Value of the wheel-flange factor. Sbor. VNIIPMASH no.25:52-66
'59. (MIRA 13:11)

(Cranes, derricks, etc.)

KONOVALOV, L.V., inzh.

Durability of parts of crane mechanisms. Vest, mash. 40
no. 9:7-11 S '60. (MIRA 13:9)
(Cranes, derricks, etc) (Strength of materials)

10.7400

28171
S/145/61/000/005/005/009
D221/D306

AUTHORS: Shuvalov, S.A., Candidate of Technical Sciences, and
Konovalov, L.V., Engineer

TITLE: Consideration of variable loads when calculating
fatigue resistance in bending

PERIODICAL: Izvestiya vysshykh uchbenykh zavedeniy. Mashino-
stroyeniye, no. 5, 1961, 51 - 59

TEXT: The authors suggest the use of a unified method of fatigue tests for components working with variable stresses in order to assess the effect of metal training by various loads. Experiments carried out by ВНИИПТМАШ (VNIIPTMASH) and ЦНИИ ЧМ (TsNII ChM) employed variable symmetrical loads in bending on a МВП -12000 (MVP-12000) program controlled machine. Specimens were plain round, without stress concentrations. The amplitude of stresses during each test was continuously varied by a cam mechanism following in section A0 (Fig. 1) the step function of

Card 1/8

Consideration of variable loads ...

28272
S/145/61/000/005/005/009
D221/D306

$$n_i = n_c \left(\frac{M_i - M_{\min}}{M_{\max} - M_{\min}} \right)^{\alpha - \frac{1}{4}} \quad (1)$$

where M_i , M_{\max} , M_{\min} (σ_i , σ_{\max} , σ_{\min}) are the current, maximum and minimum amplitudes of bending moment; n_c - number of half cycles of load per period of stress amplitude variation (per one turn of cam); $\alpha = 1/4$ is the exponent that characterizes the changes of stress amplitudes within the range $\sigma_{\max} \div \sigma_{\min}$ (curves 1 and 2 in Fig. 1). The selected law of variation corresponds to cyclic loads of cranes. The total life of specimen N , is determined by $N = n_c \lambda$, where λ is the number of cam turns until the destruction of the specimen. A graph is plotted for steel 40 on the basis of experimental data. The analysis of curves indicates that an increase between the maximum and minimum levels of stresses shifts the fatigue line to the right. There is a simultaneous level increase in the maximum stressing. With adequate accumulation of results due to

Card 2/8

APPROVED FOR RELEASE: 06/19/2000

CIA-RDP86-00513R000824320019-

Consideration of variable loads ...

S/145/61/000/005/005/009
D221/D306

similar tests, it will be possible to provide empirical relationships between the life duration and load curves which would form a basis for calculations of a specified service term. At present, the calculation of components subject to variable stresses is being carried out in respect to the equivalent load or limit stress. In the case of the intermittent law of fluctuations in the stress amplitude

$$\lambda \int \frac{dn_1}{N_1} = a \quad (4)$$

is employed as stated by S.V. Serensen and L.A. Kozlov (Ref. 4: Vestnik mashinostroyeniya, no. 12, 1953). In the above equation, dn_1 is an infinitely small number of cycles of loads during the intermediate stressing of σ_1 , N_1 is the number of cycles prior to destruction with a stress of σ_1 on the endurance curve and in the case of a constant amplitude of stresses. Coefficient a is a cha-

Card 3/8

Consideration of variable loads ...

²⁸¹⁷
S/145/61/000/005/005/009
D221/D306

racteristic resistance to overloads of the material, λ is the number of fluctuation periods of the stress amplitude during the life. Substituting the differential dn_1 from Eq. (1) into

$$N = n_c \lambda, \quad (2)$$

as well as N_1 from the expression of the endurance curve, $N_1 \sigma_1^m = N_0 \sigma_{-1}^m$, the author deduce

$$\frac{N}{4 \sigma_{-1}^m N_0 (\sigma_{max} - \sigma_{min})^{\frac{1}{4}}} \int_{\sigma_{min}}^{\sigma_{max}} \sigma_i^m (\sigma_i - \sigma_{min})^{-\frac{3}{4}} d\sigma_i = a, \quad (5)$$

where σ_{-1} is the continuous limit of endurance in the case of a constant amplitude of stresses with a symmetrical cylce; N_0 is the number of cycles corresponding to the bend of the endurance curve; N is the number of cycles of destruction given by Eq. (2); m is

Card 4/8

28171

S/145/61/000/005/005/009
D221/D306

Consideration of variable loads ...

the cotangent of angle of the inclination between the endurance curve and the horizontal axis. A clearer notion on the "relief" of surface which is formed by values of a is obtained from a special graph, shown in Fig. 8. This is plotted for steel CT 45 (ST 45), and for different combinations of $\sigma_{\max}/\sigma_{-1}$ and $\sigma_{\min}/\sigma_{-1}$. Analysis of data indicates that the characteristic of a decreases with the rise of ultimate strength of steel. The relationship is involved. Simplification in calculations is achieved by assuming $a = 1$. This results in 4 % errors for "soft" steels and 5 % for hard materials. It appears that in the case of variable amplitude of stresses, the continuous limit of endurance rises with respect to the maximum stress, or a sharp bend of fatigue curves takes place when a greater number of load cycles will be required for the destruction of the component. Consequently, prior to the accumulation of an adequate amount of experimental data, it is necessary to determine the equivalent number of cycles by assuming $a = 1$, and excluding

$\frac{M_{\min}}{M_{\max}} = \frac{\sigma_{\min}}{\sigma_{\max}} < 0.3$ from calculations. A numerical example is given
Card 5/8

S/032/61/027/004/012/028
B:03/B201

AUTHOR: Kononov, L. V.

TITLE: Test method of the fatigue bending strength of steel to determine the effect of drawing under stress and of periodic recovery

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 4, 1961, 441-443

TEXT: The author describes the determination methods for drawing under stress and for periodic standstill upon the fatigue bending stress of steel, and presents the results obtained. He used smooth, round steel samples (type 45) tested in a modernized fatigue-testing machine (TsNIITMASH construction type Y-20 (U-20)) adapted for automatic starting and stopping. Two "cantilever samples" (konsol'naya proba) at a time could be tested by it. The problem has been so far insufficiently dealt with in the literature. The following facilities were added to the machine: brake 1, counter of stress cycles 2, and two limit switches 3 (Fig. 2). Drive, sample fixing facility 4, stress device 5 were left unchanged. To achieve the automation of the testing course, electric

Card 1/7

Test method of the fatigue ...

S/032/61/027/004/012/028
B103/B201

motor 6 and the coil of the brake magnet were connected to the drumlike control system which featured a counter for the number of switchings (Fig. 3). The respective limit switch stopped the machine whenever a sample broke. The counter of stress cycles 2 and that of switchings made it possible to control the fulfillment of the present test program. Counter 2 (Fig. 2) was necessary since due to frequent starting and stopping discrepancy resulted between the rpm of the motor and that of the spindles 7. The switch-in counter was a pulse counter recording also the number of current pulses fed to the motor. It received the pulses via the control system. The joint action of the two counters makes it possible to rigorously observe the required interrelations between switch-in duration ("work of sample") and standstill ("recovery of sample"), in that a chosen number of switchings per minute is ensured. Tests have been conducted under uninterrupted operation and by two programs "work - standstill". The value ED of the relative switch-in duration and the number of switchings have been in every single program chosen in such a way as to correspond to the measured characteristics of lifting mechanisms in ordinary traveling cranes.

Card 2/7

S/032/61/027/004/012/028
B103/B201

Test method of the fatigue ...

$ED = \frac{T_{mach}}{T_z} \cdot 100$, where T_{mach} denotes the working time of the mechanism, and T_z is the cycle duration. The fatigue curves of Fig. 4 are based on the author's results. The results have been interpreted by making use of A. K. Mitropol'skiy's and M. Ya. Shashin's methods, and resulting data have served as the basis for the author's table. The main divergences σ_X and σ_Y have been calculated, and the following correlation equation has

been derived: $X_Y = \bar{X} + r_{1/1} \cdot \frac{\sigma_X}{\sigma_Y} (Y_1 - \bar{Y})$, where \bar{X} denotes the average probable value of the log of cyclic durability, and Y_1 is a random value of the logarithm of stress. Then, (in logarithmic coordinates)

$r_{1/1} \cdot \frac{\sigma_X}{\sigma_Y} = m$, i.e., equal to the exponent of the equation of the fatigue

curve $\sigma^m \cdot Z = \text{const}$. Both this equation and the correlation equations derived by the author are valid only for stresses below the yield point.

Card 3/7

Test method of the fatigue ...

S/032/61/027/004/012/028
B103/B201

The author summarizes his findings as follows: (1) His fatigue test methods permit the evaluation of the effect of drawing under stress as well as the periodic standstill upon the fatigue bending strength of steel. (2) His test programs have yielded equal values for the long-time fatigue limit. The value of the exponent m in the fatigue curve remained practically constant. (3) The short part of the fatigue curve is shifted to the left with growing number of switchings per minute. This has to be taken into account when calculating machine parts for fatigue. There are 4 figures, 1 table, and 5 Soviet-bloc references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut pod"yemno-transportnogo mashinostroyeniya (All-Union Scientific Research Institute of Lifting and Transportation Machine Building)

Card 4/7

SNESAREV, G.A.; KONVALOV, L.V.

Standardization of crane mechanisms and regulation of their
operating conditions. Standartizatsiia 25 no.8:15-19 Ag '61.
(MIRA 14:7)

(Cranes, derricks, etc.--Standards)

KONOVALOV, L.V., ingh.

Investigating fatigue strength of steel under operating
conditions of crane mechanisms. Vest.mash. 42 no.3:21-24 Mr
'62. (MIRA 15:3)

(Steel--Fatigue)

TIMOSHUK, L.T.; KULIKOV, A.P.; KONOVALOV, L.V.; SHUVALOV, S.A.

Parameter "a" as characteristic of metal resistance to overloading.
Sbor. trud. TSNIICHM no.24:349-369 '62. (MIRA 15:6)
(Steel--Testing) (Strains and stresses)

KONOVALOV, M.

Great changes. Avt.transp. 39 no.9:9-10 S '61. (MIRA 14:10)
(Kupyansk--Transportation, Automotive)

KONOVALOV, M.

Stand for dismantling and assembling of the front axle of the
GAZ-51 motortruck. Avt.transp. 40 no.10:54 0 '62. (MIRA 15:11)
(Motortrucks—Maintenance and repair)

KONOVALOV, M.

Results of the consolidation. Avt.transp. 41 no.138-9 Ja '63.
(MIRA 16:2)

(Transportation, Automotive)

KONOVALOV, M.B., inzh.

Three-phase choke with a solid magnetic circuit. Vest. elektroprom.
33 no.7:60-64 J1 '62. (MIRA 15:11)
(Electric coils) (Electric relays)

1ST AND 2ND ORDER										3RD AND 4TH ORDER									
<p>CA KONOVALOV, M.D.</p> <p>A superconductive relay. M. D. Kononov. <i>Zavodskaya</i> <i>Lav. 9, No. 1, 121-8 (1963)</i>. — When connected to a photo- element the relay described can be used for the continuous control of the color and turbidity of liquids; for regulating the chem. compn. of a colored bath, for indicating and regulating the level of liquids and for connecting and dis- connecting any app. using photoelements. When con- nected to a thermocouple the relay can be used to regulate the temp. W. M. Henn</p>																			
<p>ASB-5.1A METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>EDOH BOMERY</p>									
<p>EDOH 1791021VH</p>										<p>EDOH 1791021VH</p>									
<p>EDOH 1791021VH</p>										<p>EDOH 1791021VH</p>									

LETOKHOV, V.S.; VATSURA, V.V.; PUKHLIK, Yu.A.; FEDOTOV, D.I.; KOSOZHICHIN,
A.S.; ZHABOTINSKIY, M.Ye.; DASHEVSKAYA, Ye.I.; KOZLOV, A.N.;
RUVINSKIY, L.G.; VASIN, V.A.; YURGENEV, L.S.; NOVOMIROVA, I.Z.;
PETROVA, G.N.; SHCHEDROVITSKIY, S.S.; BELYAYEVA, A.A.; BRYKINA,
L.I.; GLEBOV, V.M.; DRONOV, M.I.; KONOVALOV, M.D.; TARAPIN, V.N.;
MIKHAYLOVSKIY, S.S.; ZHEGALIN, V.G.; ZHABIN, A.I.; GRIBOV, V.S.;
MAL'KOV, A.P.; CHERNOV, V.N.; RATNOVSKIY, V.Ya.; VOROB'YEVA, L.M.;
MILOVANOVA, M.M.; ZARIPOV, M.F.; KULIKOVSKIY, L.F.; GONCHARSKIY,
L.A.; TYAN KHAK SU

Inventions.. Avtom. i prib. no.1:78-80 Ja-Mr '65.
(MIRA 18:8)